

REMARKS

Claims 1-6 are now pending in the application. Minor amendments have been made to the specification and claims to simply overcome the objections to the specification and rejections of the claims under 35 U.S.C. § 112. The amendments to the claims contained herein are of equivalent scope as originally filed and, thus, are not a narrowing amendment. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

The Examiner objects to the drawings because the first conductive layer is allegedly not shown in the Figures. Because the claimed first conductive layer is allegedly not shown in the Figures, the Examiner alleges that the first conductive layer must be shown or the feature cancelled from the claims.

Notwithstanding, Applicant respectfully asserts that the claimed first conductive layer is shown in the figures. More specifically, as shown in Figure 3, the conductive layer 5 is comprised of both the first conductive layer and the second conductive layer. As described in paragraph [0046], the conductive layer 5 directly connects the aluminum electrode 2 and the surface of the protrusion 4. However, an indirect connection method may be adopted. Specifically, the first conductive layer is formed in order to cover the electrode 2. Then, after the resin layer has been formed on regions except for the regions immediately above the aluminum electrode 2, the rest of the conductive layer 5 is formed. Accordingly, the conductive layer 5 covering the electrode 2 as well as the conductive

layer 5 covering the protrusion 4 are electrically connected. As such, the claimed first and second conductive layers form a single conductive layer 5.

REJECTION UNDER 35 U.S.C. § 112

Claims 1-6 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

The Examiner alleges that the claims are indefinite because it is not clear how to remove the layer of resin located between the conductive layers while the conductive layer covers the top surface of the resin. With respect to claim 5, the Examiner alleges that it is not clear how the conductive layer including the first conductive layer and the second conductive layer on the electrodes and the layer of the resin can be formed by forming the first conductive layer covering the electrodes before the layer of resin is formed.

Claim 1, however, has been amended to recite a method for manufacturing a semiconductive device comprising a step of forming a plurality of electrodes on a semiconductor element. Claim 1 now also recites a step of applying a layer of resin to the semiconductor element in a region of the element that does not include the electrodes, wherein the layer of resin is applied such that a height of the layer is greater than a height of the electrodes. Furthermore, Claim 1 now recites a step of forming a conductive layer over the plurality of electrodes and the layer of resin, and then patterning the conductive layer. Lastly, claim 1 recites removing portions of the layer of

resin by using the patterned conductive layer as a mask so that remaining portions of the layer of resin form a plurality of protrusions.

By this amendment, Applicant respectfully asserts that it is now clear that the conductive layers are formed before the patterning of the conductive layer. Moreover, it is now clear that the layer of resin is removed by using the pattern conductive layer as a mask. Because claim 1 now conforms with 35 U.S.C § 112, second paragraph, Applicant respectfully asserts that claim 1 is now definite.

With respect to claim 5, this claim has been amended to recite a step of forming the conductive layer which comprises a first step of forming a conductive layer that covers the electrodes before the layer of the resin is formed, and a second step of forming a second conductive layer after the layer of resin is applied, wherein the second conductive layer is connected to the first conductive layer and covers a top surface of the layer of the resin. As stated above, this subject matter is described at paragraph [0046]. Because claims 1 and 5 have been amended to remove any ambiguity, Applicant respectfully asserts that claims 1 – 6 are in conformance with 35 U.S.C. § 112, second paragraph.

According, reconsideration and withdrawal of this rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 102

Claims 1 and 5 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kazuo (JP 02-272737). This rejection is respectfully traversed.

The Examiner alleges that Kazuo discloses a method for manufacturing a semiconductor device including electrodes, and a plurality of protrusions which protrude higher than the electrodes and which are made of a resin in a predetermined pattern. The Examiner also alleges that Kazuo teaches conductive layers that are electrically connected to the electrodes and which cover top surfaces of the protrusions. Lastly, the Examiner alleges that Kazuo teaches a method comprising applying a layer of the resin to the semiconductor device and forming the conductive layers on the semiconductor device. Applicant respectfully asserts, however, that claim 1 as amended is not anticipated by Kazuo.

More particularly, Kazuo fails to teach the claimed step of removing portions of the layer of resin by using the conductive layer as a mask. Because Kazuo does not teach using a conductive layer as a mask to remove portions of layer resin, the claimed method of claim 1 is not anticipated. With respect to claim 5, Kazuo also fails to teach such a step of forming a first conductive layer and then forming a second conductive layer. Moreover, claim 5 is dependent on claim 1. As such, claim 5 is not anticipated for at least the same reasons.

Accordingly, reconsideration and withdrawal is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claims 3-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kazuo (JP 02-272737) in view of Watanabe (U.S. Pat. No. 6,458,682). This rejection is respectfully traversed.


Claims 3 and 4 are dependent on independent claim 1, addressed above. Claims 3 and 4 are neither anticipated nor obvious for at least the same reasons as independent claim 1. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

Dated: August 25, 2005

By: 
G. Gregory Schivley
Reg. No. 27,382
Bryant E. Wade
Reg. No. 40,344

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. Box 828
Bloomfield Hills, Michigan 48303
(248) 641-1600

GGG/BEW/JAH